Figure 1

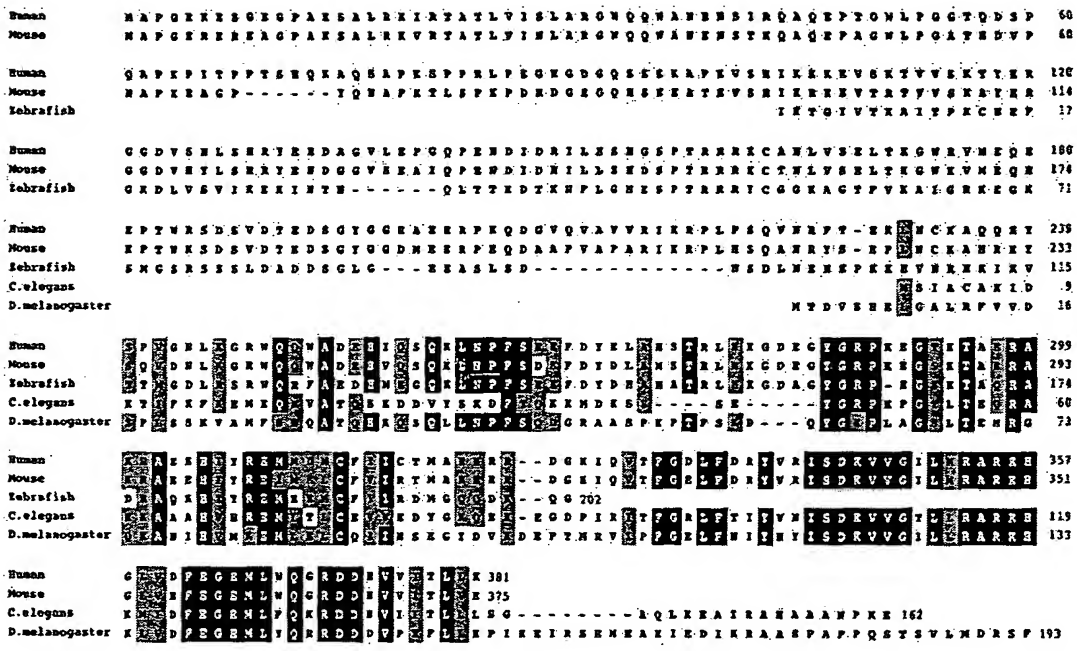


Figure 2

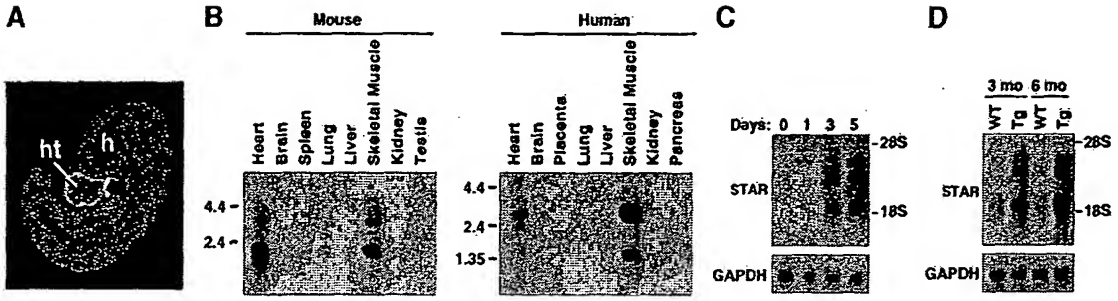

A
ht
h
B
Mouse
Heart
Brain
Spleen
Lung
Liver
Skeletal Muscle
Kidney
Testis
4.4
2.4
Human
Heart
Brain
Placenta
Lung
Liver
Skeletal Muscle
Kidney
Pancreas
4.4
2.4
1.35
C
Days: 0 1 3 5
28S
STAR
18S
GAPDH
D
3 mo
6 mo
WT
Tg
WT
Tg
28S
STAR
18S
GAPDH

Figure 3

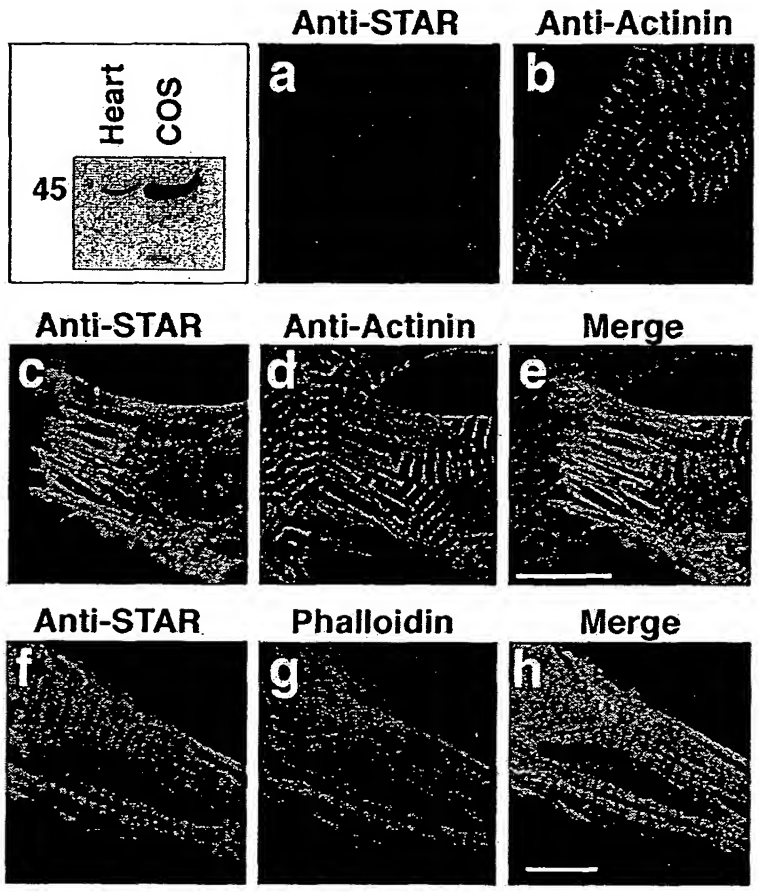

Anti-STAR
Anti-Actinin
Heart
COS
45
a
b
Anti-STAR
Anti-Actinin
Merge
c
d
e
Anti-STAR
Phalloidin
Merge
f
g
h

Figure 4

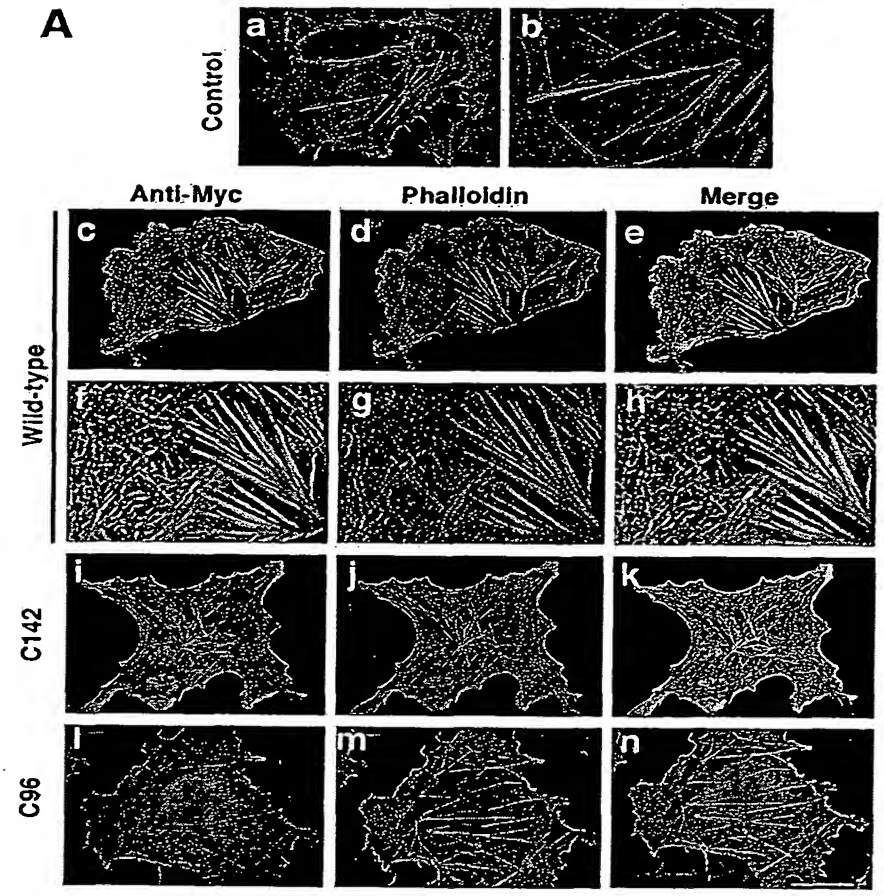

A
Control
a
b
Anti-Myc
Phalloidin
Merge
Wild-type
c
d
e
f
g
h
C142
i
j
k
C96
l
m
n
B
Control
WT
N346
N279
N233
N101-233
C142
C86
Del234-247
Del248-262
Del263-279
Del234-279
Anti-Actin
Anti-Myc

Figure 5

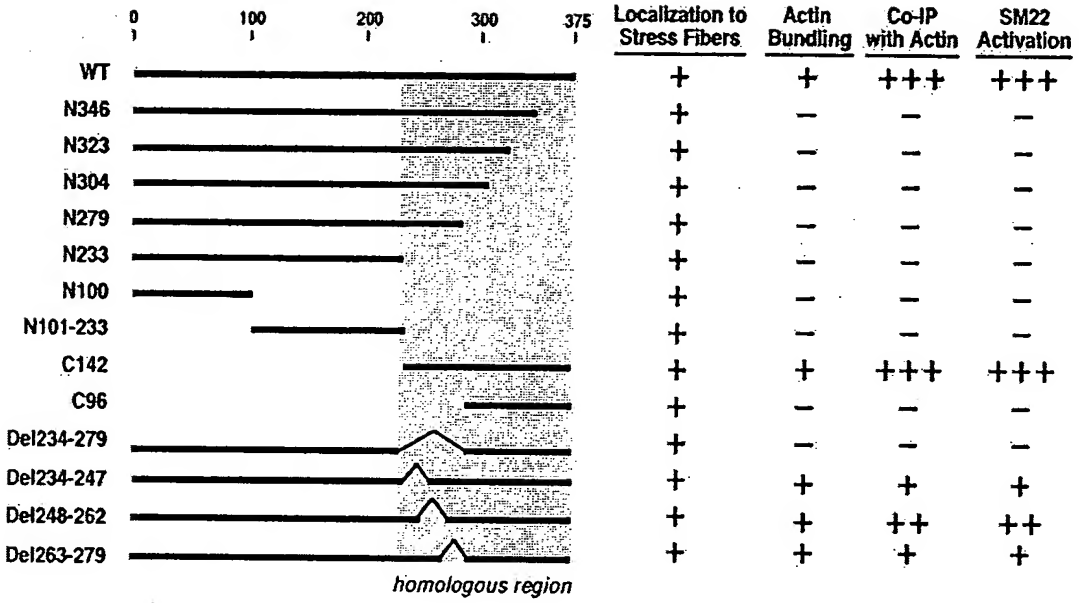

0
100
200
300
375
WT
N346
N323
N304
N279
N233
N100
N101-233
C142
C96
Del234-279
Del234-247
Del248-262
Del263-279
homologous region
Localization to Stress Fibers
Actin Bundling
Co-IP with Actin
SM22 Activation
+ + +++ +++
+ – – –
+ – – –
+ – – –
+ – – –
+ – – –
+ – – –
+ – – –
+ + +++ +++
+ – – –
+ – – –
+ + + +
+ + ++ ++
+ + + +

Figure 6

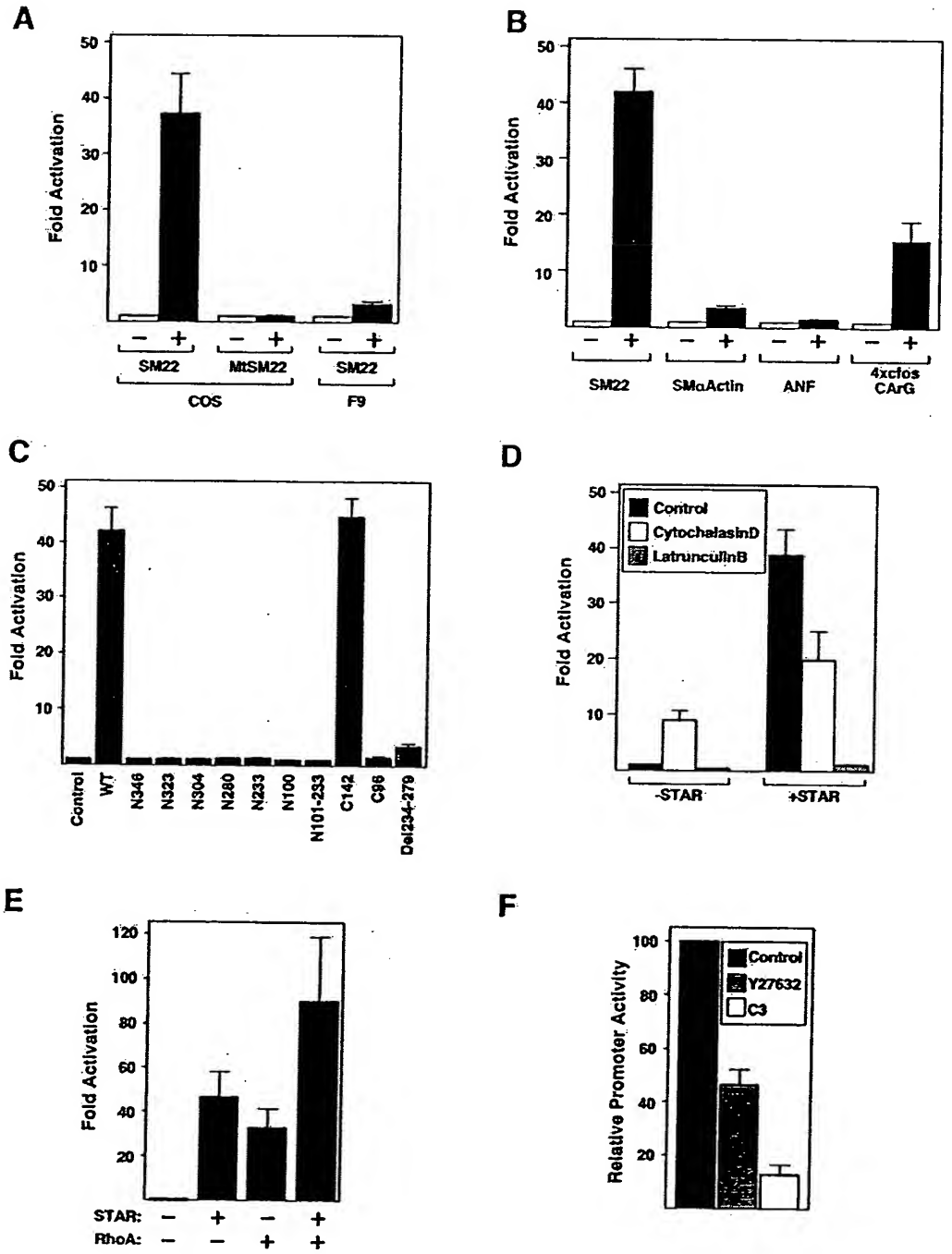
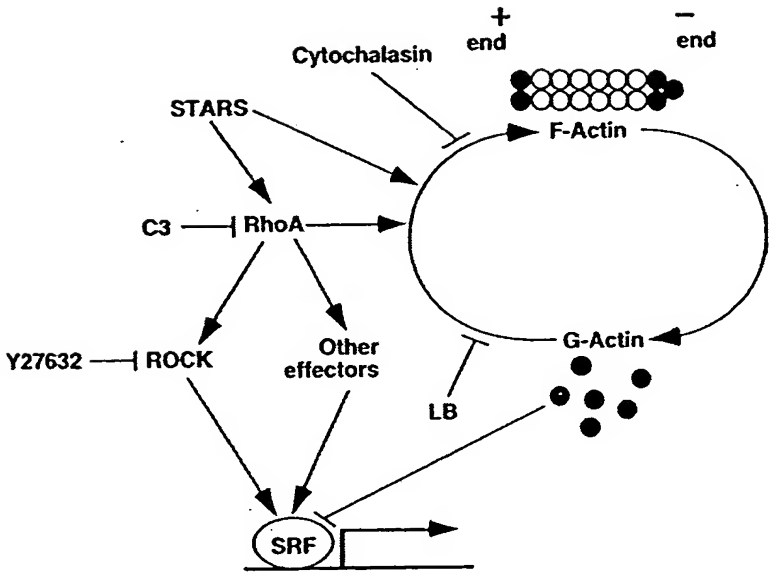

A
Fold Activation
50
40
30
20
10
− + − + − +
SM22
MtSM22
SM22
COS
F9
B
Fold Activation
50
40
30
20
10
− + − + − + − +
SM22
SMαActin
ANF
4xcfos CArG
C
Fold Activation
50
40
30
20
10
Control
WT
N346
N323
N304
N280
N233
N100
N101-233
C142
C96
Del234-279
D
Fold Activation
50
40
30
20
10
Control
CytochalasinD
LatrunculinB
-STAR
+STAR
E
Fold Activation
120
100
80
60
40
20
STAR: − + − +
RhoA: − − + +
F
Relative Promoter Activity
100
80
60
40
20
Control
Y27632
C3

Figure 7


+
end
−
end
Cytochalasin
STARS
F-Actin
C3
RhoA
Y27632
ROCK
Other
effectors
G-Actin
LB
SRF